

## About Solver completion messages

When Solver reaches a solution, it displays one of the following two messages in the **Solver Results** dialog box:

- **Solver found a solution. All constraints and optimality conditions are satisfied.**

All constraints within the precision setting in the **Solver Options** dialog box are satisfied, and when appropriate, a local maximum or minimum value has been found for the target cell.

- **Solver has converged to the current solution. All constraints are satisfied.**

The relative change in the target cell is less than the **Convergence** setting in the **Solver Options** dialog box for the last five trial solutions. If you provide a smaller value for the **Convergence** setting, Solver could try for a better solution but would take more solution time.

When Solver cannot reach an optimal solution, it displays one of the following messages in the **Solver Results** dialog box:

- **Solver cannot improve the current solution. All constraints are satisfied.**

Only an approximate solution has been found, but the iterative process cannot find a better set of values than those displayed. Either further accuracy is not achievable, or the precision setting is too low. Try changing the precision setting in the **Solver Options** dialog box to a larger number, and then run the problem again.

- **Stop chosen when the maximum time limit was reached.**

The maximum amount of time has elapsed without finding a satisfactory solution. To save the values found so far and also save future recalculation time, click **Keep Solver Solution** or **Save Scenario**.

- **Stop chosen when the maximum iteration limit was reached.**

The maximum number of iterations has been reached without finding a satisfactory solution. Increasing the number of iterations might help, but you should examine the final values for insights into the problem. To save the values found so far and also save future recalculation time, click **Keep Solver Solution** or **Save Scenario**.

- **The Set Target Cell values do not converge.**

The value for the target cell is increasing (or decreasing) without bound, even though all constraints are satisfied. You might have omitted one or more constraints in setting up the problem. Check the current worksheet values to see how the solution is diverging, check the constraints, and then run the problem again.

- **Solver could not find a feasible solution.**

Solver could not find a trial solution that satisfies all constraints within the precision setting. It is likely that the constraints are inconsistent. Examine the worksheet for a possible mistake in the constraint formulas or in the choice of constraints.

- **Solver stopped at user's request.**

You clicked **Stop** in the **Show Trial Solution** dialog box, either after interrupting the solution process or when stepping through trial solutions.

- **The conditions for Assume Linear Model are not satisfied.**

You selected the **Assume linear model** check box, but the final calculations in Solver yield values that do not agree with the linear model. The solution is not valid for the actual worksheet formulas. To check whether the problem is nonlinear, select the **Use automatic scaling** check box, and run the problem again. If you see this message again, clear the **Assume linear model** check box, and then run the problem again.

- **Solver encountered an error value in a target or constraint cell.**

One or more formulas yielded an error value on the latest calculation. Find the target or constraint cell that contains the error, and change its formula to yield an appropriate numeric value.

You typed an invalid name or formula in the **Add Constraint** or **Change Constraint** dialog box, or you typed "integer" or "binary" in the **Constraint** box. To constrain a value to an integer, click **Int** in the list of comparison operators. To set a binary constraint, click **Bin**.

- **There is not enough memory available to solve the problem.**

Microsoft Excel couldn't allocate the memory needed by Solver. Close some files or programs and try again.

### **Another Excel instance is using SOLVER.DLL.**

More than one Microsoft Excel session is running, and one session is already using Solver.dll. Solver.dll can be used in only one session at a time.

Additional resources